

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A process for watermarking images for processing and transmission of stationary or video images including embedding a message in the images before their transmission by modifying data characteristic of the images, comprising performing a co-watermarking by periodic periodically embedding of a binary matrix P into the initial image so as to determine, on reception, co-ordinates of an origin of the initial image and allow allowing registration of the images received to be correlated relative to this the origin of the initial image so as to make it possible to read the embedded message.

Claim 2 (Previously Presented): Process according to Claim 1, wherein the co-watermarking binary matrix is a pseudo-random matrix P of size mxm obtained by symmetry of a binary m-sequence.

Claim 3 (Currently Amended): Process according to Claim 1, further comprising building an image I_p of ~~[[a]]~~ the same size as [[of]] the watermarked initial image by periodic repetition of the pseudo-random matrix P, and modifying the initial image pixel luminance values, ~~of pixels with~~ each pixel of the initial image having co-ordinates ~~of the image which are homologous correspond to these~~ the co-ordinates of the pixels of the image obtained by periodic repetition of the co-watermarking matrix, whereby the luminance values are modified using by a marking amplitude, depending which, for each pixel, depends on the value binary state of the corresponding homologous pixel in the image obtained by periodic repetition of the watermarking matrix.

Claim 4 (Previously Presented): Process according to Claim 2, wherein, to determine at reception the co-ordinates of the origin of the initial image, further comprising chopping the image received into blocks, summing the blocks to form a matrix M of size $m \times m$, cross-correlating the matrix M with the co-watermarking binary matrix P by successive shifts of the matrix M relative to the matrix P , and taking as co-ordinates of the origin the co-ordinates for which the cross-correlation product is a maximum.

Claim 5 (Previously Presented): Process according to Claim 1, wherein, to perform a watermarking on video images, further comprising transforming the image into blocks of DCT coefficients, embedding a message into the image by modulating the DCT coefficients so as to perform an adaptive marking in order to achieve invisibility of the embedded message upon the restoration of the image, and rendering the message robust to degradations by the use of a redundancy.

Claim 6 (Previously Presented): Process according to Claim 5, further comprising associating with each bit b_i of the message to be embedded two coefficients of a block of DCT coefficients and modifying the values of the two coefficients selected as a function of the binary value of the bit of the message to be embedded.

Claim 7 (Previously Presented): Process according to Claim 6, wherein, to perform the watermarking, further comprising comparing a difference of absolute values of the pairs of coefficients chosen from each block with a specified threshold value S so as to modify the absolute value of one of them as a function of the binary state of the bit of the message to be embedded when the result of the comparison is less than the specified threshold value S .

Claim 8 (Previously Presented): Process according to Claim 5, wherein, to read the watermark of a video image, further comprising decoding the pairs of DCT coefficients corresponding to the bits of the embedded message by comparing an absolute value of the difference of the absolute values of the pairs of coefficients with the specified threshold value S, comparing with a zero value the difference of the absolute values of the pairs of coefficients so as to determine a binary state of the corresponding embedded bits when the result of the comparison is less than the value of the threshold S or declaring the binary state of the embedded bits as being undetermined if the result of the comparison is greater than the value of the threshold S.

Claim 9 (Currently Amended): Process according to Claim 1, further comprising performing a watermarking on all ~~points of~~ pixels in the image.

Claim 10 (Previously Presented): Process according to Claim 1, further comprising performing a postprocessing on the images received so as to estimate quality and reliability of the embedded message by using redundancy of the embedded message.

Claim 11 (Previously Presented): Process according to Claim 10, further comprising repeating the watermarking message on each video image during a specified number of times by comparing for each bit of the watermarking message a number of times it is received according to a first state and the number of times it is received according to a second state, and comparing totalized values thus obtained with a specified threshold value determined by the Bernoulli binomial probability law.